

the piece of bone in position and prevent its becoming depressed.—*Centlb. f. Chirg.*, No. 47, 1889.

II. Tetany Following the Extirpation of Goitre. By DR. A. VON EISELBERG (Vienna). The neurosis known as tetany, first noticed by Billroth as a sequel to total extirpation of the thyroid gland, is very dangerous, in that respect differing from the other trouble which goes under the same name.

In 12 cases observed at Billroth's clinic mostly women, eight ended fatally, and those twelve cases are 23% of all his cases of total extirpation of the thyroid gland. Two cases became chronic. Neither a previous nervous predisposition nor the healing of the wound, nor a wounding of the recurrent nerve can explain the condition. In seven cases there was, besides the ordinary characteristic symptoms, an involvement of the muscles of the face, neck, larynx, diaphragm and abdomen, so that dyspnœa and even loss of consciousness occurred.

In the two above mentioned chronic cases in which the disease had lasted respectively 6 and 9 years, the attacks were more frequent in cold damp weather.

In the fatal cases death occurred in from 3 to 30 days, and in one case after 7 months.

The proof that only total extirpation of the thyroid gland causes tetany is furnished according to the reporter, by the following facts:

1. That in 53 total extirpations, the disease followed in 12 cases and after 109 partial operations it was never observed.
2. From the results of experiments on animals made by Schiff, Wagner, Horsley and others.

As a result of over 100 operations on the thyroid practiced on cats, Eiselberg came to the following conclusions:

1. The one-sided total extirpation always causes fatal tetany. Neither can the previous or subsequent transplantation of the thyroid gland of another, or of the same cat, nor the injections of thyroid fluid, nor the administration of opiates prevent the occurrence of the disease.
2. Partial extirpation never causes tetanic symptoms.
3. Double-sided total extirpation causes fatal tetany, which never-

theless only appears after extirpation of the second half. In two cases it was possible to transplant the first half in the mesentery in one case and in the other between the muscles of the abdomen and the peritoneum, and thus preventing the trouble.

4. Removal of four-fifths of the gland always causes tetany, though it may not be fatal.

5. Attempt at shelling out the gland by ligature of all the structures going to it, always produced a tetany which was fatal to most of the animals.

These results, agree with those of most observers, and are directed against the theory of Munk, who says the gland is a useless organ and that tetany is due to the irritation which the healing of the wound sets up in the neighboring organs.

A comparison of human tetany following extirpation of the thyroid gland with that seen in carnivorous animals, shows identical symptoms. Von Eisberg recalled in this connection that the cachexia strumipriva and myxœdema presented analogous phenomena in the tetany of monkeys, and that in these animals an increase of mucine was found in the tissues. And he argues with Horsley that the function of the thyroid is to render mucinoid substances innocuous, as proved by the experiments of Wagner, who succeeded by injections of mucine in producing tetany in healthy cats. The apparently inconstant sequelæ of total extirpation of the thyroid in man, sometimes tetany, sometimes cachexia and sometimes neither, Eisberg attempts to explain on the following grounds:

1. That in man, contrary to animals, the operation is done for a pathologically altered gland.
2. That an accessory thyroid is more common than was supposed.
3. That notwithstanding total extirpation the disease returned in 7 cases and 4 of the 53 total extirpations at Billroth's clinic, only 11 patients were positively known to have withstood this operation without subsequent symptoms for a long period of time.

Eisberg concludes that it is the duty of the surgeon to abstain from total extirpation of the gland at any price. There are a number of excellent methods of operation for the partial removal of this organ. the

best of which is the intra-glandular shelling out of the diseased nodules as proposed by Socin.—*Centlb. f. Chirg.*, No. 49, 1889.

F. C. HUSON (New York).

CHEST AND ABDOMEN.

I. Eight Cases of Appendicitis Treated by Early Operation. By Dr. A. WORCESTER (Waltham, Mass.).

CASE I.—A healthy woman in the prime of life. Has been subject to attacks of "colic." On January 6, 1889, the pain began in the morning and increased through the day. Her evening temperature was normal. There was tenderness on pressure, but no evidence of tumor in the right iliac lumbar region. The next day there was more pain, and the evening temperature was 99°. After a fairly good night, her temperature was 100°. Micturition difficult. Severe pain in vagina and in right abdomen, which was slightly distended and very tender. There was no dulness on percussion, and only a slight resistance on pressure. *Per vaginam* the uterus was found slightly pushed to the left and exquisitely painful if moved by the finger. Rectal examination negative.

Operation fifty-four hours after initial symptoms. Incision three inches long in the right linea semilunaris. A few ounces of turbid inodorous serum escaped. The swollen appendix was easily found and drawn outside. Its tip was gangrenous. Owing to the firmness of the adhesions binding down the cæcum, it was very difficult after amputating the appendix to approximate the peritoneal surfaces of its stump. Silk sutures were employed. The abdomen was flushed with hot boiled water, and the wound closed with silk-worm gut sutures. She rallied fairly well, but for five days could keep nothing in the stomach. Peptonized enemata kept her alive. The temperature for the first week was normal. The troublesome distension of the abdomen was relieved by turpentine enemata and use of rectal tube. During the second week the stitches were removed and there was a slight discharge of thin odorless pus. On the twelfth day there was discharged from the sinus a silk ligature which had been left in by oversight; and